Fletcher
TECHNICAL COMMUNITY
COLLEGE

Fundamentals of Chemistry

Spring 2009 Syllabus

John Hamner

Section A Room 111 4T 12:00 to 1.15 pm TH

Course Number: 1010
Course Title: Fundamentals of Chemistry
Credit Hours: 3/0/3 (Lecture/Lab/Total)
Contact Hours: 45
Instructor: John C. Hamner Jr. M. S. University of Arizona

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You may also contact the Math/Science chair:
Terry Authement, Instructor of Mathematics,
Phone 985-858-5743 Office 108

Office Hours/Class Schedule

TIME	MON	TUES	WED	THURS	FRI
7:30	PHSC1200A	PHSC1000B	PHSC1200A	PHSC1000B	PHSC1200A
8:30	OFFICE	PHSC1200B	OFFICE	PHSC1200B	OFFICE
9:30	OFFICE		OFFICE		OFFICE
10:30	OFFICE	OFFICE	OFFICE	OFFICE	OFFICE
11:30	PHSC1000A	OFFICE	PHSC1000A	OFFICE	PHSC1000A
12:00		CHEM1010A		CHEM1010A	
12:30	PHSC1100A		PHSC1300A		
1:30					
2:30					
3:30					

Office Location: Portable Building 2

Class Location: Room 111

Course Description:

CHEM 1010 – FUNDAMENTALS OF CHEMISTRY I (3/0/3)
Co-requisite: Eligibility for ENGL 1010 and DVMA 0930. The nature and properties of matter including the common elements and their compounds. Periodic classification, atomic and molecular theories, and the relation of atomic and molecular structure to chemical behavior. Designed for students needing only one year of chemistry. (400501)

Prerequisite: Eligibility for ENGL 1010 and DVMA 0930.

Course goals:

Students will develop an understanding of:

- Scientific inquiry.
- Mathematics and measurement systems used by the scientific community.
- Properties and changes of properties of matter.
- The language used to describe chemical compounds and their activity.

Course Objectives:

Upon the completion of this course students will:

- Develop models and predictions using the relationship between data and explanations.
- Compare alternative explanations and predictions.
- Communicate scientific procedures, information and explanations.
- Demonstrate Safety procedures during scientific investigation.
- Use mathematics and appropriate tools and techniques to gather, analyze, and interpret data.
- Understand that matter is made up of particles called atoms and that atoms of different elements are different.
- Understand the arrangement of the periodic table of elements and make predictions about the activity of elements based on their position in the table.
- Describe the particles that make up atoms.
- Understand the terms mass number and atomic number, and use them to make predictions about the make up of individual atoms.
- Predict the electron configuration of atoms based on their atomic number and position in the periodic table.
- Be able to write the electron dot structure for various atoms.
- Describe the different types of chemical bonding.
- Be able to write the chemical formula for simple compounds and give the name of compounds from their formula.
- Calculate the molecular weight and percent composition of a compound.
- Write and balance the chemical equation for simper reaction.
- Understand the various types of chemical reactions and identify them from a balanced chemical equation.
- Develop an understanding of aqueous solutions.
- Distinguish the difference between acids and bases.
- Distinguish the difference between inorganic and organic compounds.
- Describe the difference between chemical and nuclear reactions.
- Identify the types of nuclear reactions.
- solve problems using a scientific approach
- understand the use of scientific notation and the correct units of measurement for length, volume, and mass
- understand the differences between physical and chemical changes of matter
- understand the different forms of energy and its affect on matter
- understand the structure of the atom and the formation of ions
- understand the combination of atoms to form molecules
- name different molecules and to write chemical formulas from names
- balance chemical equations
- measure and calculate chemical quantities
- separate molecules based on differences in chemical and physical properties

Required Text:

Introductory Chemistry, 6th ed, Steven S. Zumdahl, Houghton Mifflin Co. (ISBN: 0-618-80327-0)

Supplementary Reading/ Library Project:

Each student enrolled in this course must make a scrap book of Science and Technology articles read in the FTCC library during in this semester. The **minimum number or articles is 45**. The scrap book must contain the following:

- Title page which includes
  - Course name
  - Student name
  - Section
  - Semester
- Table of contents
- A copy of the article, followed by a brief hand written summary of the article.

Course Outline:

OUTLINE OF TOPICS

CHAPTER(S)		POINTS
1	Chemistry: An Introduction	
2	Measurements and Calculations	
3	Matter	
4	Chemical Foundations: Elements, Atoms, and Ions	
5	Nomenclature	
6	Chemical Reactions	
7	Reactions in Aqueous Solutions	
8	Chemical Composition	
9	Chemical Quantities	
10	Energy	
11	Modern Atomic Theory	
12	Chemical Bonding	
13	Gases	
14	Liquids and Solids	
15	Solutions	
16	Acids and Bases	

Evaluation:

Four tests will be given. Each test and the scrap book will count for 20 % of the final grade
All tests will be comprehensive.

Grading: A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = 59%-↓ I = Incomplete
W = Withdraw
(See Student Handbook for complete grading scale and definitions.)

Attendance: You are expected to attend all classes. If an absence occurs, it is the responsibility of the student to make up all work missed. I will track your attendance carefully and adhere to school policies regarding excessive absences. (See Student Handbook guidelines specific to Attendance Policy.) You may be dropped from the class for excessive absences.

The last day to drop a class with a " W " or to resign from the college is 03/26/2008. If you are dropped by the instructor your grade will be a "F".

NOTE: One point for each absence from class will be subtracted from your final average.

Class Interruptions / Disruptions: If you are more than 5 minutes late for class or leave before I dismiss class you will be recorded as absent. Cell phones, pagers, or any electronic communication devices that could distract the class from the lesson are to be turned **off** before entering the classroom. It is your responsibility to take your education seriously. If you disrupt class in any way you will be asked to leave and not return until you have seen me privately.

Class Participation: Expected. Students must apply appropriate terms and theories to actual or simulated situations presented in class. Individual and/or group work may be assigned at anytime during class at the discretion of the instructor. If you are absent from class, you cannot participate in class discussions and or the class work assigned and your final average may suffer (see Attendance).

Tests: Knowledge will be tested using multiple-choice question/response format predominantly, however; matching, listing, True and False, and constructed response formats may also be used as deemed appropriate to course content. Pop quizzes may be expected.

Extra Credit: Extra credit assignments may be given in instances where a student has not performed well using traditional paper and pencil tests. This will be used judiciously and on an individual basis only.

Missed Exams: Making up exams is strongly discouraged. If you miss an exam you will make it up on the last scheduled class meeting. I will adhere to the exam make-up policy in your student handbook. Make-up exams may not resemble the exam being made up and may include additional constructed response questions.

Academic Integrity: Academic dishonesty which includes cheating, copying the work of a classmate, plagiarism, or practices contradictory to honest learning will be dealt with according to school policy. Expect to receive a failing grade for work presented and referral to the appropriate administrator for further disciplinary action. This could result in a failing grade for the course, dismissal from the course, or dismissal from school.

Students with Disabilities: Fletcher Technical Community College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Students with documented disabling conditions who seek accommodations must make their requests known to the Disabilities Coordinator at the beginning of each semester. If an Accommodation Plan is written, I will be more than happy to try to meet your needs in class.

Transfer of Course Credit: General education courses that are listed on the Louisiana Board of Regents' *Statewide Student Transfer Guide and Articulation Matrix* are transferable to other public four-year universities and two-year colleges in the state of Louisiana. This publication is available for use at the Board of Regents' website at www.regents.state.la.us . Courses taught by instructors holding a master's degree may be transferable. Student(s) should check with the receiving institution concerning these courses.

Attendance Policy for General Education Classes:

Students are allowed to miss 15% of the total number of classes for the semester:
Monday, Wednesday, Friday classes (3 50-Minute Classes per week) = 7 allowed absences
Tuesday, Thursday (2 75-Minute Classes per week) = 5 allowed absences
Monday through Friday classes (3 50-Minute Classes per week and 2 75-Minute Classes per week) = 12 allowed absences
Night classes (1 250-Minute class per week) = 3 allowed absences

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Directions for Logging Onto Blackboard and Domain Computers:

Enter your username and password.

Your username is the combination of:
le + your first name initial + your last name + your last 2 Social Security digits

Your new password is the combination of:

your first name initial + your last name initial + your last 4 Social Security digits

Ex: John Smith with a SSN 123-45-6789

Username: j s m i t h 8 9 Password: js6789

After logging in, you can set a new permanent password in the tools section under personal information.

Directions for Printing Information Posted on Blackboard:

Option 1:

- Before opening the document: (this is the recommended method)
  1. With the **document still closed**, right click the mouse button on the document name.
  2. Select "save target as..." option on the menu.
  3. Choose the desktop in the list of options on the left because it will make the document easy to find, and give the document a name (the computer will assign a default name that you can use).
  4. Once the document has finished downloading, you can open it from the desktop and print.

** If you are using a school computer, be sure to delete the document when you are done printing.

Option 2:

- While viewing the document: (this method is not recommended because you will often get wasted pages)
  1. identify the printer icon just above the left corner of the document.
  2. press the icon
  3. when the print screen pops up, hit OK.